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OIL AND GAS DEVELOPMENTS
IN
PENNSYLVANIA
IN
1952

By
CHAS. R. FETTKE



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF INTERNAL AFFAIRS

WILLIAM S. LIVENGOD, *Secretary*

TOPOGRAPHIC AND GEOLOGIC SURVEY

R. W. STONE, *Acting Director*

1953



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OIL AND GAS DEVELOPMENTS IN PENNSYLVANIA IN 1952

BY
CHAS. R. FETTKE¹

ABSTRACT

Major drilling activities in Pennsylvania during 1952 were confined to the Oriskany sandstone gas territory of north-central Pennsylvania. The Driftwood gas field in Cameron County, discovered in 1951, underwent intensive development and the Leidy gas field in Clinton County, discovered early in 1950, also remained active. At the end of 1952, the productive area of the Driftwood field included about 1,400 acres. Fifteen producing wells with average initial open-flow capacities of 2,957,000 cubic feet of gas per day, and 20 dry holes were completed in it. The limits of production had only been established at the northeast end. The main Leidy pool now includes 11,000 acres. It had produced approximately 87.6 billion cubic feet of gas by the end of 1952. The nearby Tamarack pool includes about 500 acres and had produced about 8 billion cubic feet of gas.

During 1952, 160 deep wells (Middle Devonian or deeper) were completed throughout the State, as compared with 84 in 1951. Of these, 73 were gas wells, 84 were dry holes, and three were drilled for gas storage. Thirty-six of the wells can be classified as exploratory wells and 124 as development wells. Of the exploratory wells, two were drilled only through the Tully limestone, 29 through the Oriskany sandstone, four through the Albion or Medina sandstone and one through the Trenton limestone. Two of the Oriskany tests were successful. Three prominent structures in north-central Pennsylvania were proved non-productive in the Oriskany.

Exploratory drilling in the shallow-sand territory (Upper Devonian or higher) during 1952 led to the discovery of one small gas field in southwestern Pennsylvania, and two small gas pools in northwestern Pennsylvania. The total number of shallow wells drilled was 1,739, essentially the same as in 1951. The Bradford field accounted for 76.9 percent of Pennsylvania's oil production during 1952.

Total oil production in Pennsylvania during 1952 is estimated at 11,179,400 barrels.

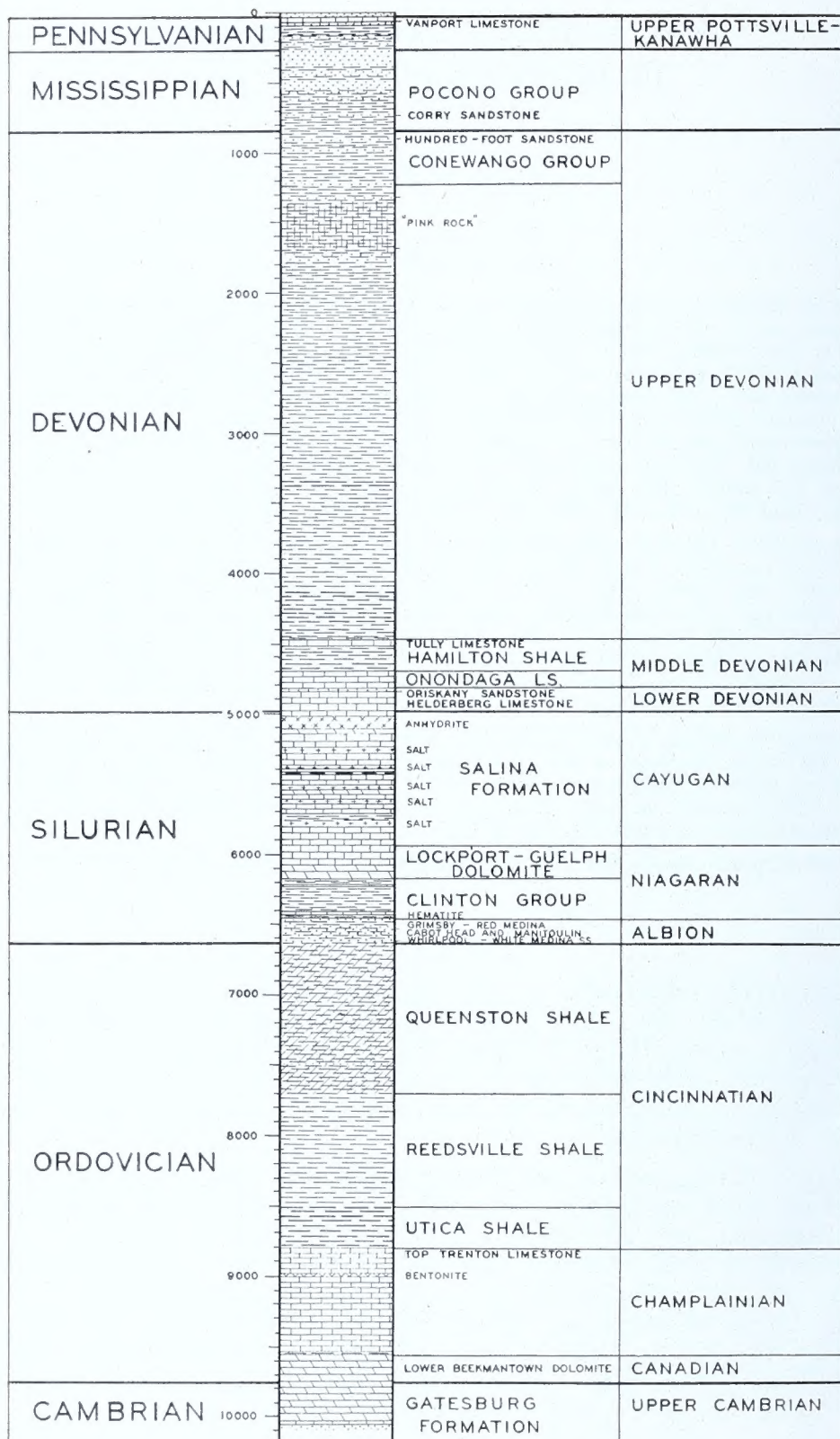
INTRODUCTION

This report summarizes oil and gas developments in Pennsylvania in 1952. It is the third of a series of annual reports of this type, having been preceded by Progress Reports 135 and 139. The summarized records of deep wells (P.R. 135, table 7; P.R. 139, table 1; and P.R. 143, table 1) are intended to supplement Bulletin M 31, "Summarized Record of Deep Wells in Pennsylvania."

Major drilling activity in Pennsylvania was again confined to the Oriskany sand gas territory of north-central Pennsylvania during 1952. One hundred and sixty deep wells (Middle Devonian or deeper) were completed in 1952. Seventy-three of these were gas wells, 84 were dry holes; and three were drilled for gas storage. In the shallow-sand territory (Upper Devonian or higher) 1,739 wells were completed, as compared with 1,722 in 1951. Of these, 240 were gas wells, 24 were oil wells, and 93 were dry holes. Sixteen were drilled for gas storage and 1,366 were drilled in connection with secondary-recovery oil operations.

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COLUMNAR SECTION WESTERN PENNSYLVANIA

OBTAINED IN JESSIE G. HOCKENBERRY WELL NO. 1
MANUFACTURERS LIGHT & HEAT COMPANY
MERCER TOWNSHIP, BUTLER COUNTY, PA.

FIGURE 1

CHAS. B. FETTER 1049

DEEP-SAND DEVELOPMENT

Summarized records of the deep wells completed in north-central and western Pennsylvania during 1952 are assembled in Table 1. The locations of the wells are shown on the maps in Plates 1, 2, and 3, and the stratigraphic positions of the formations tested, in Figure 1. Of the 160 deep wells completed, 73 were gas wells, 84 were dry holes, and three were drilled for gas storage. The annual rate of deep-sand exploration and development since the discovery of the Tioga field in 1930, the first deep-sand field to be opened in Pennsylvania, is shown in Figure 2. Major activity was confined to the Oriskany sand gas territory of north-central Pennsylvania, particularly that in Cameron and Clinton Counties.

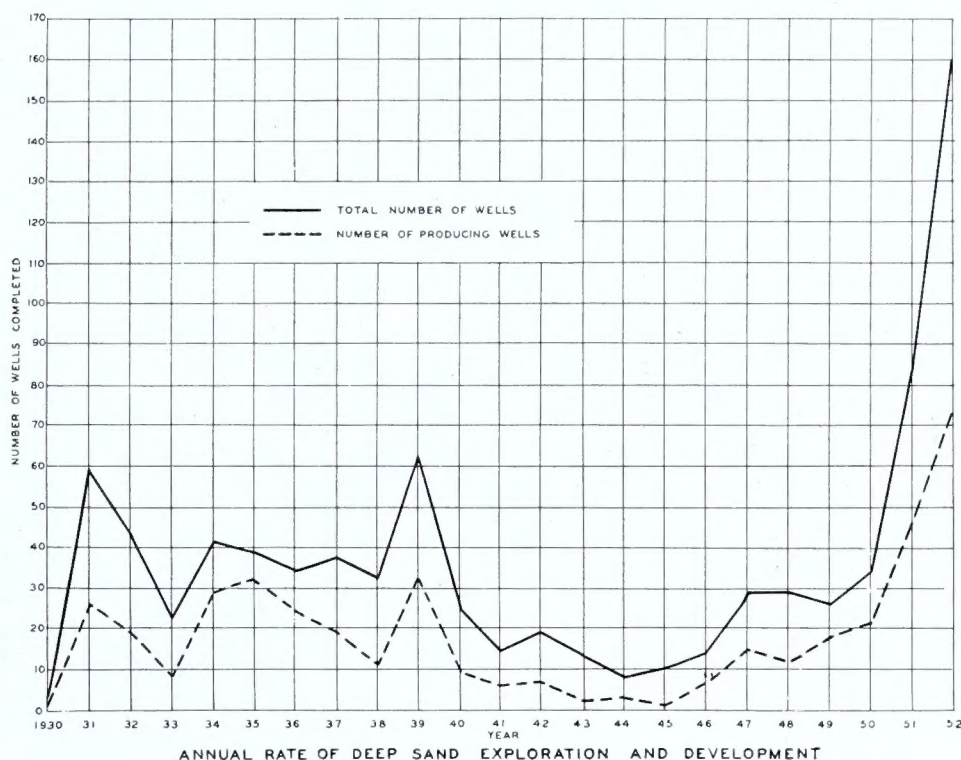


FIGURE 2

The Driftwood field in Cameron County, discovered in 1951, underwent intensive development during 1952. Fifteen producing wells with average initial open-flow capacities of 2,957,000 cubic feet of gas per day, and 20 dry holes were completed in it. The initial open flows of the individual wells ranged from 700,000 to 6,880,000 cubic feet per day. The Driftwood structure is divided into at least three blocks by faults (Plate 2) that intersect the northeast-southwest axis of the structure at oblique angles. The northeast block has not proved productive, due in part to unfavorable sand conditions and in part perhaps to escape of gas along fracture zones. This and faulting accounted for the large number of dry holes. At the end of 1952, the productive area included about 1,400 acres which had produced approximately 3 billion cubic feet of gas. The limits of production of the field had only been established at the northeast end. A fault divides the productive area into two pools.

An exploratory well, the Charleroi Mt. Club, No. 1, in Benezette Township, southeastern Elk County, encountered gas in commercial quantity in the Oriskany sandstone early in 1953. The well is located on a continuation of the Driftwood structure six miles southwest of the southwesternmost of the producing Driftwood wells. The intervening area is now undergoing intensive development and it is likely that much of it may be proved productive.

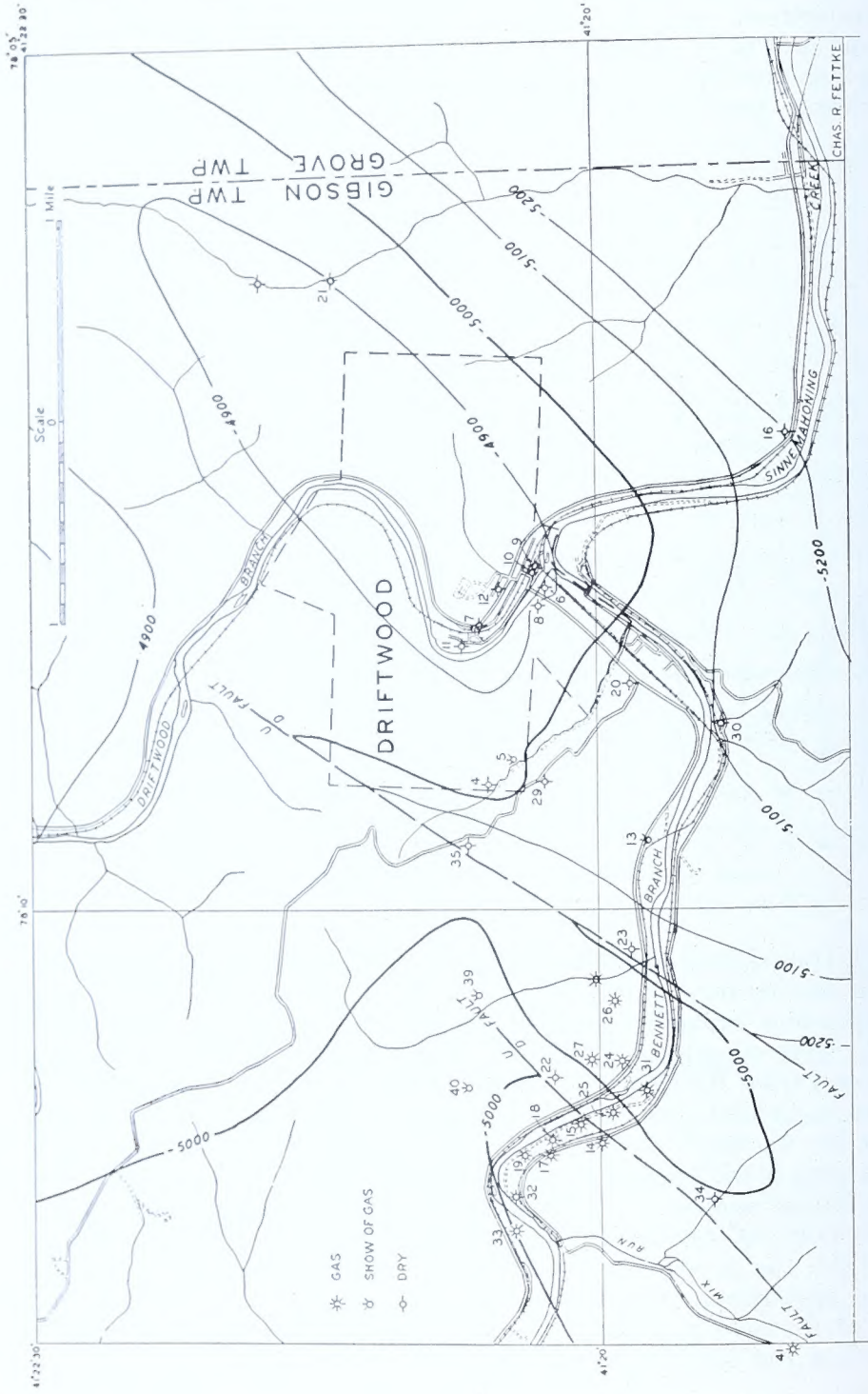


PLATE 2. Driftwood gas field, Cameron County, Pennsylvania, December 31, 1952.
Structure contours on top of the Oriskany sandstone, contour interval 100 feet. Elevations below sea level.

LEIDY GAS FIELD

CLINTON COUNTY

PENNSYLVANIA

DECEMBER 31, 1952

PENNSYLVANIA GEOLOGICAL SURVEY

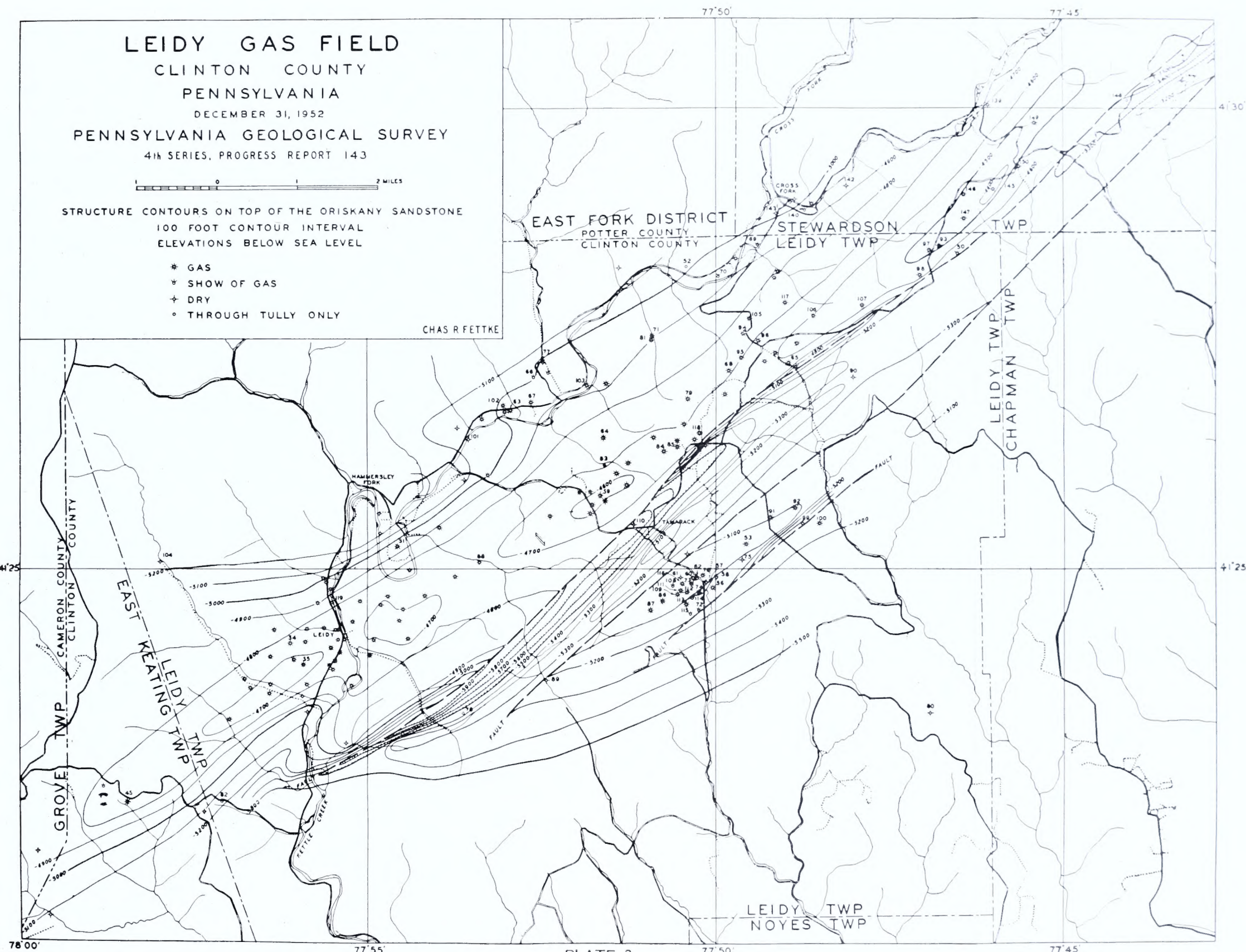
4th SERIES, PROGRESS REPORT 143

1 0 1 2 MILES

STRUCTURE CONTOURS ON TOP OF THE ORISKANY SANDSTONE
100 FOOT CONTOUR INTERVAL
ELEVATIONS BELOW SEA LEVEL

- * GAS
- * SHOW OF GAS
- * DRY
- o THROUGH TULLY ONLY

CHAS R FETTK



Development of the Leidy gas field in Clinton County, discovered early in 1950, continued during 1952. Thirty-four producing wells with average initial open flows of 4,800,000 cubic feet of gas per day, and 19 dry holes were completed in, and adjacent to, the main pool. The initial open flows of the individual gas wells ranged from 100,000 to 34,000,000 cubic feet per day. The developed area now includes 11,000 acres and there is a possibility for some further extension toward the northeast. Production had dropped to about 30,000,000 cubic feet of gas per day at the close of 1952, as compared with 150,000,000 cubic feet per day in 1951. At the end of 1952, the pool had produced about 87.6 billion cubic feet of gas. Slightly more than 34 billion cubic feet of this came from two wells.

A subsidiary gas pool, the Tamarack (see Plate 3), was opened early in 1952 by the completion of the Thomas Jents No. 1 well. This well had an initial open flow capacity of 60,000,000 cubic feet of gas per day and is reported to have produced about 4.8 billion cubic feet of gas before it was drowned out by salt water. The developed area now includes about 500 acres. Sixteen producing wells with average initial open flows of 8,600,000 cubic feet of gas per day, and 10 dry holes had been completed in and adjacent to the Tamarack pool at the end of the year. The initial open flows of the gas wells ranged from 115,000 cubic feet to 60,000,000 cubic feet per day, and the total production at the end of 1952 amounted to about 8 billion cubic feet. The Tamarack pool is located on a fault block on the southeast flank of the Leidy dome and is separated from the main Leidy pool by a long and narrow block bounded by two faults. The block separating the two pools has thus far proved non-productive. The completion of a large well, State of Pennsylvania No. 3 on Tract 23, northeast of the Tamarack pool and apparently separated from it by a fault, may mean the presence of another gas-bearing fault block on the southeast flank of the Leidy dome. Some salt water accompanied the gas, however, which may mean that the pool will turn out to be a small one.

Four development wells with average initial open flow capacities of 1,042,000 cubic feet of gas per day were completed in the East Fork-Wharton pool of southern Potter County, which produces from the Oriskany sand of the Lower Devonian. Three development wells, with average initial open flows of 668,000 cubic feet per day, were completed in the Corry pool of Erie County, which produces from the Whirlpool or White Medina sand of the Lower Silurian. The seven wells did not appreciably extend the limits of the respective pools in which they are located.

Wells 44, 48, 120 and 121, located along the axis of the Hyner anticline in Centre and Clinton Counties (see Plate 1), encountered unfavorable reservoir conditions in the Oriskany formation. The sandstone is very calcareous. The four tests, along with one completed earlier, indicate that the large Hyner dome in central Clinton County will probably not be proved productive in the Oriskany. Wells 46, 47 and 49 encountered a similar condition in the Oriskany under the Ferney anticline in eastern Clinton County. Wells 132, 133, 134 and 137 at the southwestern end of the Germania dome in southeastern Potter County, found no sandstone at the Oriskany horizon. The four tests, together with two earlier ones, indicate that the Oriskany will probably not be proved productive under the Germania structure. Well 127 in north-central Lycoming County is

the first well to test the Oriskany under the Cogan House dome. Only a show of gas was encountered. The sandstone had a thickness of 88 feet in the well, but was calcareous. Inasmuch as the Cogan House dome is a large one, however, the single well does not necessarily condemn the entire structure.

The Jesse B. Miller well (No. 2, Plate 1), an Ordovician test on the Schellsburg dome in Bedford County in south-central Pennsylvania, was abandoned at a depth of 8,979 feet. The well started in the Shriver member of the Oriskany formation (Lower Devonian) and was bottomed in the Bellefonte dolomite (Lower Ordovician). A flow of 600,000 cubic feet of "sour" gas per day was encountered at 8,870 feet, 26 feet below the top of the Bellefonte dolomite, but the flow exhausted itself before the well was completed.

Of the 36 deep exploratory wells completed in 1952, only two, Nos. 73 and 100, were successful (Table 1 and Plate 1). Two of the exploratory wells were drilled only to the Tully limestone because nearby wells, completed earlier, had encountered no sandstone at the Oriskany horizon; 29 were Oriskany tests, 4 were Albion or Median, and one was a Trenton test.

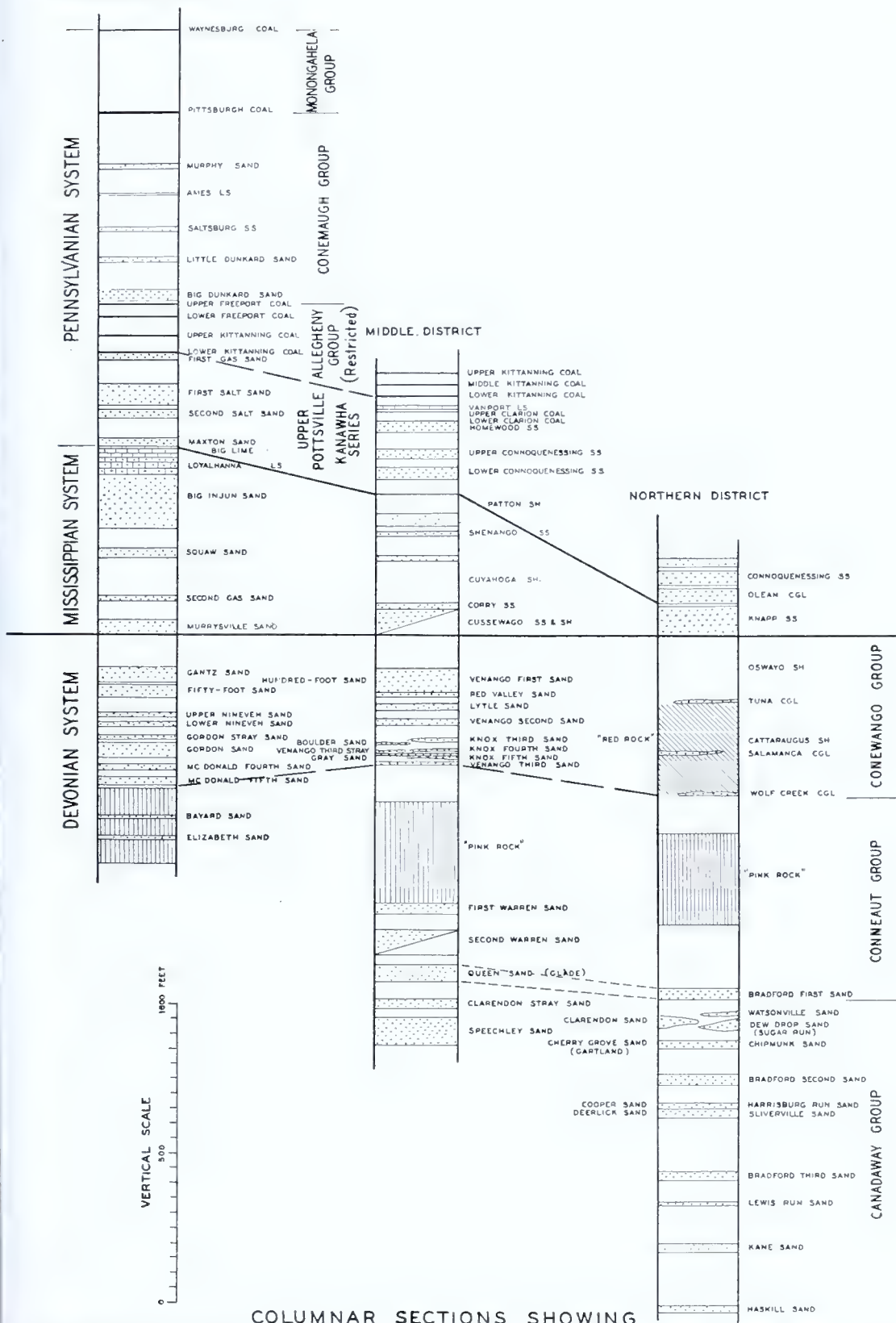
Owing to the large output of many of the Oriskany sand wells in the Driftwood and Leidy fields, the highly competitive manner in which these fields are being exploited has made speed in drilling of paramount importance. Rotary drilling was, therefore, introduced in the area in 1952. Twenty-five wells were completed by this method during 1952. Seven rotary rigs were active at the end of the year.

SHALLOW-SAND DEVELOPMENTS

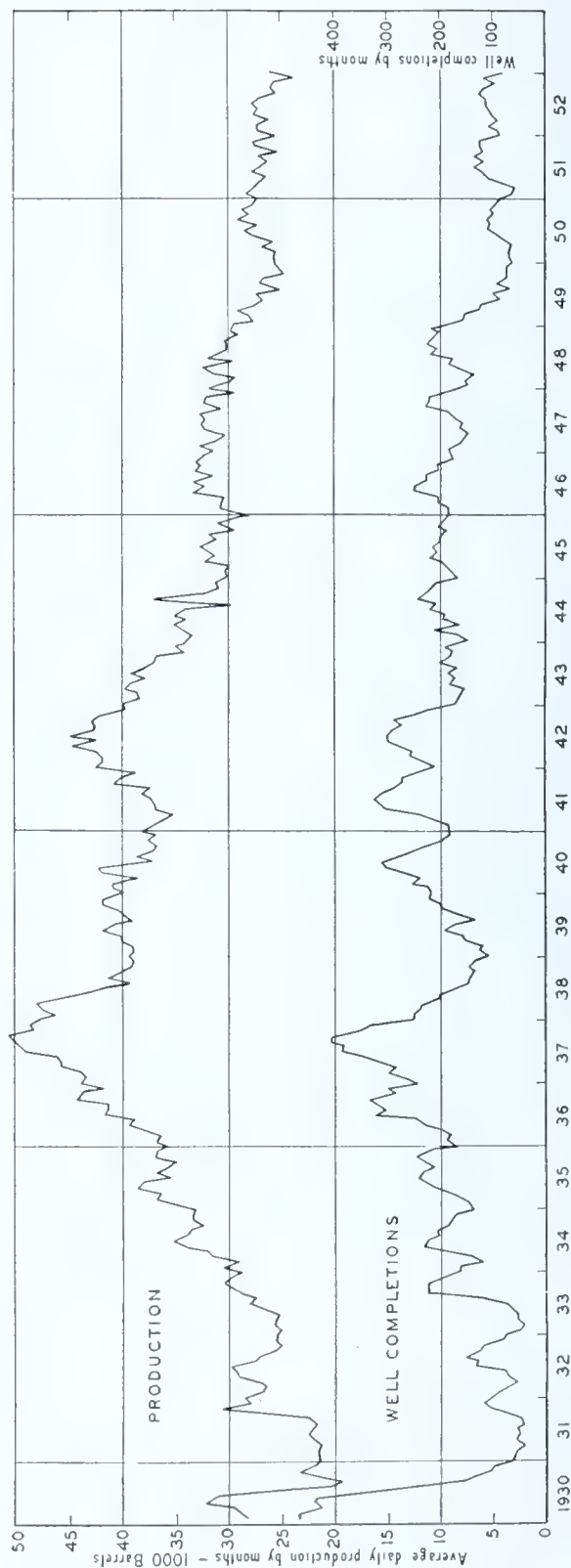
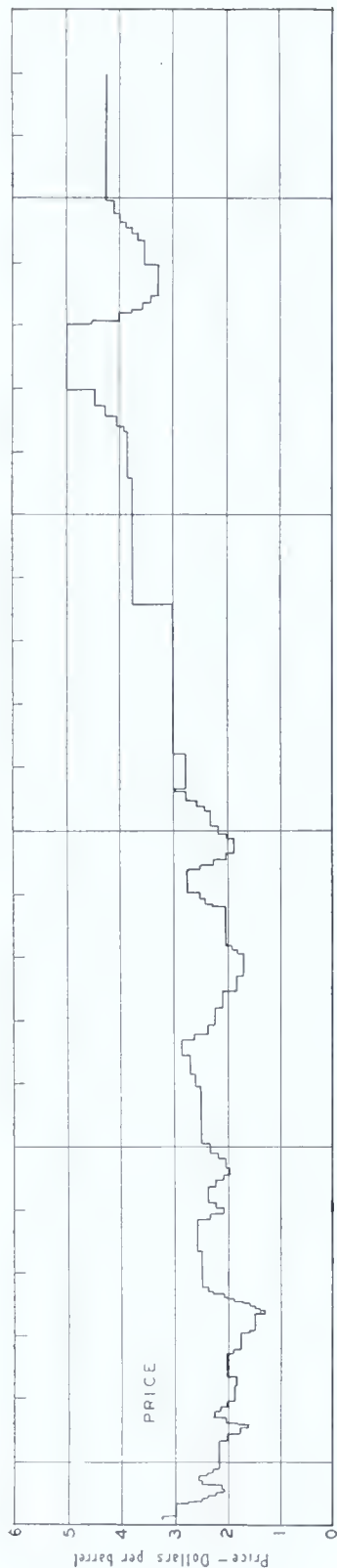
Shallow-sand well completions in western Pennsylvania, exclusive of those drilled in connection with underground gas storage and secondary-recovery oil operations, are shown in Table 2. During 1952, 357 such wells were drilled, of which 67 per cent were gas wells, 7 per cent were oil wells, and 26 per cent were dry holes. The 240 new gas wells had a total initial open-flow capacity of 34,784,000 cubic feet per day, as compared with the total initial open-flow capacity of 32,209,000 cubic feet of the 238 gas wells completed in 1951. The 24 new oil wells had a total initial production of 108 barrels per day, as compared with the total initial production of 198 barrels of the 19 oil wells completed in 1951. The results obtained in 1952 by deepening 27 shallow-sand wells are shown in Table 3. The stratigraphic positions of the Upper Devonian and higher oil and gas sands are shown in Figure 3.

GAS

One new shallow-sand gas field was discovered in southwestern Pennsylvania in 1952, in Wharton Township, Fayette County. Although the discovery well is small, it is of interest because no commercial gas production had been developed previously in Upper Devonian or higher strata southeast of the Chestnut Ridge anticline in Fayette County. Further exploration will be required to determine the significance of the discovery. Two small shallow-sand gas pools of minor importance were



COLUMNAR SECTIONS SHOWING
STRATIGRAPHIC POSITIONS OF OIL AND GAS SANDS
OF WESTERN PENNSYLVANIA



CRUDE OIL PRICES, PRODUCTION AND WELL COMPLETIONS - BRADFORD FIELD

FIGURE 4

discovered in Jenks Township, Forest County, and one in Liberty Township, McKean County.

The greatest activity in the shallow-sand gas belt of western Pennsylvania occurred in Armstrong County where 56 gas wells and 9 dry holes were completed. The largest well encountered an initial open flow of 2,553,000 cubic feet of gas per day in the Fifth sand, with a reservoir pressure of 670 psi. The average initial open-flow capacity of all of the 56 wells, however, was only 172,000 cubic feet.

Two wells averaging 3,000 feet in depth were drilled for underground gas storage in Greene County in 1952; eight wells averaging 2,520 feet, were drilled in Washington County; and 6, averaging 2,188 feet, were drilled in Westmoreland County.

OIL

In the Bradford oil field, which includes the Bradford, Guffey, and Burning Well pools, 1,252 new wells were drilled in connection with secondary-recovery operations, as compared with 1,240 in 1951. Oil production in this field, 86 per cent of whose area is in Pennsylvania, decreased from a daily average of 26,855 barrels in 1951 to 26,420 in 1952, or 1.6 per cent. Of the new wells, 1,102 were located in the Pennsylvania part of the field, and this part contributed 23,487 barrels of the daily average production. This represented 76.9 per cent of the total production of the State. The relations between crude oil prices, production, and drilling activity in the Bradford field are shown in Figure 4.

In the Kane-Clarendon area of southwestern McKean County and eastern Warren County, 117 wells were completed in 1952, mostly in connection with water-flooding projects in the Clarendon pool of east-central Warren County. In the Venango district of northern Venango and adjacent parts of northwestern Forest and southwestern Warren Counties, 174 wells were drilled in 1952, as compared with 71 in 1951, in connection with secondary-recovery oil operations. Of these, 28 were gas- or air-intake wells, 5 were water-intake, and 114 were oil wells. Oil production in the middle and southwestern districts of Pennsylvania increased from a daily average of 6,302 barrels in 1951 to 7,058 barrels in 1952, or a 12 per cent increase.

No new oil fields or pools were discovered in Pennsylvania in 1952.

OIL AND GAS PRODUCTION

Total gas production in Pennsylvania during 1952 is estimated at about 101,400,000 thousand cubic feet, as compared with 122,000,000 thousand cubic feet in 1951. The rapid exhaustion of the Leidy field accounted for most of the decline.

Oil production during 1952 is estimated at 11,179,400 barrels, as compared with 11,349,000 barrels in 1951, a decrease of 1.5 per cent. There was no change in the price structure. The price of crude oil was set in December 1950 by the Office of Price Stabilization, at \$4.25 per barrel in the northern and middle districts, and at \$3.82 per barrel in the southwestern district.

SELECTED REFERENCES ON PENNSYLVANIA GEOLOGY, 1952

- Bock, Wilhelm** (1952), *Vertex Monocline Studies of the Triassic of Southeastern Pennsylvania*, Proc. Pa. Acad. Sci., vol. XXVI, pp. 93-103.
- Ebright, John R.** (1952), *The Hyner and Ferney Anticlines and Adjacent Areas, Centre, Clinton and Lycoming Counties*, Pa. Geol. Survey, 4th ser., Bull. M 35, 32 pp. 2 figs., 2 pls.
- Feldman, Julian, Searpino, Lawrence, Pantazoplos, Gus, and Orchin, Milton** (1952), *Composition of Crude Oil from the Bradford Field, Pennsylvania*, Producers Monthly, vol. 16, no. 6, pp. 14-16.
- Fettke, Chas. R.** (1952), *Oil and Gas Developments in Pennsylvania in 1951*, Pa. Geol. Survey, 4th ser., P. R. 139, 20 pp., 4 figs., 2 pls.
- (1952), *Tioga Bentonite in Pennsylvania and Adjacent States*, Amer. Assoc. Petrol. Geol., Bull., vol. 36, no. 10, pp. 2038-2040.
- (1952), *Oil and Gas Developments in the Appalachian Basin, Past and Present*, The Mines Magazine, vol. XLII, no. 11, pp. 69-83. Reprinted as Pa. Geol. Survey, 4th ser., Bull. M 37.
- Flowers, Russell R.** (1952), *Lower Middle Devonian Meta-bentonite in West Virginia*, Amer. Assoc. Petrol. Geol., Bull., vol. 36, no. 10, pp. 2036-2038.
- Gray, Carlyle** (1952), *The High-Calcium Limestones of the Annville Belt in Lebanon and Berks Counties, Pennsylvania*, Pa. Geol. Survey, 4th ser., P. R. 140, 17 pp., 6 figs., 2 pls.
- (1952), *The Nature of the Base of the Martinsburg Formation*, Proc. Pa. Acad. Sci., vol. XXVI, pp. 86-92.
- Gouse, Harry V.** (1952), *Subsurface Structure of the Leidy Gas Field, Clinton County, Pennsylvania*, Monthly Bulletin, Dept. of Internal Affairs, Com. of Penna., June, 1952.
- Hotz, Preston E.** (1952), *Form of Diabase Sheets in Southeastern Pennsylvania*, Amer. Jour. Sci., vol. 250, no. 5, pp. 375-388.
- Moseley, John R.** (1952), *Limestones within the Belt of the Martinsburg Group in Lebanon County, Pennsylvania*, Proc. Pa. Acad. Sci., vol. XXVI, pp. 78-85.
- Shaffner, M. N.** (1952), *Preliminary Report on Geology and Mineral Resources of the Donegal Quadrangle, Pennsylvania*, Pa. Geol. Survey, 4th ser., P. R. 141.
- Stephenson, Robert C.** (1952), *Industrial Minerals in Pennsylvania in 1951*, Pa. Geol. Survey, 4th ser., I. C. 2.
- Willard, Bradford** (1952), *Lower Oriskany Contact in Eastern Pennsylvania*, Proc. Pa. Acad. Sci., vol. XXVI, pp. 71-77.
- Wilson, James Lee** (1952), *Upper Cambrian Stratigraphy in the Central Appalachians*, Geol. Soc. Amer. Bull., vol. 63, no. 3, pp. 275-322.
- Wyckoff, Dorothy** (1952), *Metamorphic Facies in the Wissahickon Schist near Philadelphia, Pennsylvania*, Geol. Soc. Amer., Bull., vol. 63, no. 1, pp. 25-57.

COUNTY	Armstrong	Bedford	Bradford	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron
MAP NUMBER	1	2	3	4	5	6	7	8	9
NAME OF WELL	M.A. McGinley	Jessie B. Miller	Carl U. Teeter	Fred Beasley	Belden-Verbeck	Jeffers Electronic Co.	W.J. Linville	Penna. R.R.	M. Riley
OPERATOR	Pittsburgh Plate Glass Co	Appalachian Basin Associates	Natl Exploration & Dev. Co	Keta Gas & Oil Co	Godfrey L. Cabot, Inc	John Fox et al	E. P. Sheridan et al	Chas E. Fralich & Associates	Murphy Oil & Gas Co
TOWNSHIP	S Buffalo	Napier	Ridgebury	Driftwood Bor.	Driftwood Bor	Driftwood Bor	Driftwood Bor	Driftwood Bor	Driftwood Bor
QUADRANGLE	Kittanning	Bedford	Sayre	Driftwood	Driftwood	Driftwood	Driftwood	Driftwood	Driftwood
LATITUDE	0.12 mi. N 40° 45'	1.60 mi. N 40° 05'	0.10 mi. S 42° 00'	0.54 mi. N 41° 20'	0.41 mi. N. 41° 20'	0.25 mi. N. 41° 20'	0.60 mi. N 41° 20'	0.29 mi. N 41° 20'	0.31 mi. N. 41° 20'
LONGITUDE	1.15 mi. W. 79° 35'	1.89 mi. W. 78° 35'	2.20 mi. E 76° 45'	0.62 mi. E. 78° 10'	0.74 mi. E 78° 10'	1.59 mi. E 78° 10'	1.42 mi. E 78° 10'	1.51 mi. E 78° 10'	1.72 mi. E 78° 10'
DATE COMPLETED	2-15-52	3-20-52	6-20-52	11-7-52	6-20-52	2-2-52	5-27-52	3-8-52	5-12-52
ELEVATION	1153	1666	1520	1183	1062	805	839	945	812
BEREA - CORRY									
MURRYSVILLE									
TULLY	6320-6420		3015-3120	5400-	5282-5406	4932-5046	4905-	5073-	4875-
ONONDAGA	6740-6918		4381-	6111-	6011-6054	5646-	5626-	5814-5846	5625-
ORISKANY	Rigging 6918-6930 Shriver 6930-6981	Shriver 0-43	4450-	6152-6176	6054-6075 Show of gas	5690-5706	5712-5745	5846-5858	5659-5672
SALINA		Tonglaway Lms. 24'-1053 W. 1653-1680				Salt 6130-			
LOCKPORT		McKenzie formation 1732-2114							
ALBION	RED MEDINA (GRIMSBY)	Castanea 2840-2870							
	WHITE MEDINA (WHIRLPOOL)	Tuscarora 2870-3148 S.W. 2920, 2938, 3046-3051							
QUEENSTON		Juniata 3768-5766 Oswego 5766-5920							
TOTAL DEPTH	7001	8979	4522	6183	6076	6130	5757	5882	5676
DEEPEST FORMATION TESTED	Oriskany	Loyalburg formation Middle Ordovician	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany
RESULT	Dry	600 Mcf sour gas at 8870 in Bellifant dolomite gas exhausted Abandoned	Dry	Gas pocket and salt water at 4461 Dry in Oriskany	120 Mcf gas from Oriskany in 14 days Abandoned	Dry	Dry	Gas pocket 5114-5128 Dry in Oriskany	Dry

* 15 minute quadrangle

Summarized record of deep wells (continued).

TABLE 1, SHEET 2

COUNTY	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron
MAP NUMBER	10	11	12	13	14	15	16	17	18			
NAME OF WELL	Regina Roach	L. Rougeaux	Harry Smith	B & O R R	Bear Paw Rod & Gun Club	Bear Paw Rod & Gun Club	Buck Trail Inn	C Caldwell	C Caldwell			
OPERATOR	Snee and Eberly	Fred Beasley	Bickford et al	Plymouth Oil Co.	Chas E Fraleigh & Associates	John Fox et al	S and M Gas & Oil Co.	Delta Drilling Co.	John Fox			
TOWNSHIP	Driftwood Bor.	Driftwood Bor.	Driftwood Bor.	Gibson	Gibson	Gibson	Gibson	Gibson	Gibson			
QUADRANGLE	Driftwood	Driftwood	Driftwood	Driftwood	Driftwood	Driftwood	Sinnemahoning	Driftwood	Driftwood			
LATITUDE	0.33 mi N. 41° 20'	0.66 mi N. 41° 20'	0.49 mi N. 41° 20'	0.25 mi S. 41° 20'	0.02 mi S. 41° 20'	0.09 mi N. 41° 20'	0.96 mi S. 41° 20'	0.25 mi N. 41° 20'	0.23 mi N. 41° 20'			
LONGITUDE	1.68 mi E 70° 10'	1.33 mi E 78° 10'	1.61 mi E 78° 10'	0.34 mi E 78° 10'	1.17 mi W. 78° 10'	1.08 mi W 78° 10'	1.97 mi W 78° 05'	1.23 mi E 78° 10'	1.14 mi W 79° 10'			
DATE COMPLETED	3-21-52	3-8-52	5-23-52	7-1-52	5-7-52	8-29-52	7-8-52	7-9-52	9-17-52			
ELEVATION	807	815	876	865	931	853	840	895	862			
BEREA - COPY												
MURRYSVILLE												
TULLY	4281-	4921-	4965-	5145-	5132-5235	5052-	5264-	5106-	5072-			
ONONDAGA	5015-	5600-	5682-	5897-5947	5832-	5749-	6017-	5830-	5790-			
ORISKANY	5652-	5691-5714	5723-	5930- Gas	5865- Gas	5790- Gas	6040-6051 Salt Water	5869- Gas and 5884, 5880 Cond. 7th of sand	5824- Gas			
SALINA												
LOCKPORT												
ALBION												
QUEENSTON												
TOTAL DEPTH	5672	5715	5743	5952	5875	5802	6082	5887	5864			
DEEPEST FORMATION TESTED	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany			
RESULT	Dry	Dry	Dry	Shot Oriskany with 20 gts 80 Mcf gas	4700 Mcf gas from Oriskany R P 3950 psi	3000 Mcf gas from Oriskany after shot R P 2850 psi	3' balters salt water in Oriskany	1000 Mcf gas from Oriskany R P 3500 psi	700 Mcf gas from Oriskany after shot R P 1200 psi			

COUNTY	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron
MAP NUMBER	19	20	21	22	23	24	25	26	27				
NAME OF WELL	C. Caldwell 2	Geo. A. Cole 1	Dodge Lumber Co., No 3	S.C. Eaton, Jr. 1	S.C. Eaton, Jr. 1	S.C. Eaton, Jr. 2	S.C. Eaton, Jr. 4	S.C. Eaton, Jr. 6	S.C. Eaton, Jr. 2				
OPERATOR	John Fox et al	New York State Nat. Gas Corp.	Chas. E. Fralich & Associates	Delta Drilling Co.	New York State Nat. Gas Corp.	New York State Nat. Gas Corp.	New York State Nat. Gas Corp.	New York State Nat. Gas Corp.	The Sylvania Corp				
TOWNSHIP	Gibson	Gibson	Gibson	Gibson	Gibson	Gibson	Gibson	Gibson	Gibson				
QUADRANGLE	Driftwood	Driftwood	Sinemahoning	Driftwood	Driftwood	Driftwood	Driftwood	Driftwood	Driftwood				
LATITUDE	0.38 mi. N. 41° 20'	0.17 mi. S 41° 20'	1.32 mi. N. 41° 20'	0.23 mi. N. 41° 20'	0.16 mi. S 41° 20'	0.12 mi. S 41° 20'	0.06 mi. S 41° 20'	0.08 mi. S. 41° 20'	0.03 mi. N. 41° 20'				
LONGITUDE	1.22 mi. W. 78° 10'	1.12 mi. E. 78° 10'	1.17 mi. W 78° 05'	0.85 mi. W 78° 10'	0.20 mi. W 78° 10'	0.76 mi. W. 78° 10'	1.02 mi. W. 78° 10'	0.46 mi. W. 78° 10'	0.75 mi. W 78° 10'				
DATE COMPLETED	10-3-52	5-26-52	10-21-52	11-26-52	7-28-52	12-11-52	11-28-52	10-13-52	12-8-52				
ELEVATION	854	897	1209	1407	926	940	840	999	1209				
BEREA - CORY													
MURRYSVILLE													
TULLY	5078 -	5160 -	5352 -	5633 -	5170 -	5166 -	5095 -	5220 -	5448 - 5560				
ONONDAGA	5809 -	5890 -	6080 -	6419 -	6061 -	5886 -	5854 -	5945 -	6166 - 6203				
ORISKANY	5839 - Gas at 5843	5930 - 5943	6110 - 6141	6449 - 6464 No gas	6102 - 6122 Salt water	5923 - 5941 Gas at 5924	5882 - Gas	5983 - Gas 5985-5987	6203 - 6225 Gas				
SALINA													
LOCKPORT													
ALBION													
QUEENSTON													
TOTAL DEPTH	5857	5952	6146	6411	6128	5944	5882	5996	6227				
DEEPEST FORMATION TESTED	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany				
RESULT	3400 Mcf gas from Oriskany after shot R.P. 2700 psi in 13 hrs	Show of gas at 2600 Dry	Dry	Dry	Gas pocket of 5737 550 gals. S.W. in 30 hrs. Abandoned	2100 Mcf gas from Oriskany after shot R.P. 2550 psi in 20 hrs.	730 Mcf gas from Oriskany after shot R.P. 2700 psi. in 36 hrs	3500 Mcf gas from Oriskany R.P. 3340 psi. in 13 hrs	1619 Mcf gas from Oriskany R.P. 2550 psi. in 16 hrs				

TABLE 1, SHEET 4

COUNTY	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron
MAP NUMBER	28	29	30	31	32	33	34	35	36								
NAME OF WELL	Ross L. Ferraro	Gladys Harrington (150 Acres)	Wm. Kelly	Robert MacMillan Estate, No. 1	Max Run School District, No. 1	Moale Estate	H. A. Moate	Bert Moody	State of Penna Tract D, No. 1								
OPERATOR	New York State Nat. Gas Corp.	Keta Gas & Oil Co.	Keta Gas & Oil Co.	Delta Drilling Co.	Blue Rock Drilling Co.	John Fox et al.	Chas. E. Fraich & Associates	New York State Nat. Gas Corp.	Manufacturers Light & Heat Co.								
TOWNSHIP	Gibson	Gibson	Gibson	Gibson	Gibson	Gibson	Gibson	Gibson	Gibson								
QUADRANGLE	Cameron	Driftwood	Driftwood	Driftwood	Driftwood	Driftwood	Driftwood	Driftwood	Driftwood								
LATITUDE	2.00 mi. S. 41° 25'	0.26 mi. N. 41° 20'	0.62 mi. S. 41° 20'	0.23 mi. S. 41° 20'	0.42 mi. N. 41° 20'	0.43 mi. N. 41° 20'	0.56 mi. S. 41° 20'	0.64 mi. N. 41° 20'	1.83 mi. N. 41° 15'								
LONGITUDE	1.32 mi. E. 78° 15'	0.64 mi. E. 78° 10'	0.92 mi. E. 78° 10'	0.91 mi. W. 78° 10'	1.45 mi. W. 78° 10'	1.61 mi. W. 78° 10'	1.45 mi. W. 78° 10'	0.32 mi. E. 78° 10'	1.33 mi. E. 78° 10'								
DATE COMPLETED	9-29-52	8-5-52	4-15-42	10-10-52	7-25-52	11-14-52	8-13-52	8-22-52	12-31-52								
ELEVATION	1812	1312	872	837	872	845	1111	1668	1102								
BEREA - CORRY																	
MURRYSVILLE																	
TULLY	6161 - 6220	5545 -	5198 -	5045 - 5175	5100 -	5098 -	5309 -	5886 -	5700 -								
ONONDAGA	6850 - 6880	6300 -	5923 -	5769 - 5803	5783 -	5810 -	6078 -	6826 -	6469 -								
ORISKANY	6880 - Show of gas	6344 - 6359	5974 - 5982	5803 - 5810 Gas	5816 - Gas at 5819	5844 - Gas	6123 - 6142 Gas at 6125-32	6854 - 6875 Salt Water	6504 - 6519								
SALINA																	
LOCKPORT																	
ALBION	RED MEDINA (GRIMSBY)																
	WHITE MEDINA (WHIRLPOOL)																
QUEENSTON																	
TOTAL DEPTH	6944	6360	5998	5827	5839	5862	6143	6880	6529								
DEEPEST FORMATION TESTED	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany								
RESULT	Show of gas at 5570 Show of gas at 6900 in Oriskany Abandoned	Dry	Dry	6800 Mcf gas from Oriskany R.P. 3400 psi in 36 hrs.	3,000 Mcf gas from Oriskany R.P. 3950 psi in 6 hrs.	1200 Mcf gas from Oriskany after shot R.P. 3050 psi in 20 min.	6880 Mcf gas from Oriskany R.P. 3850 psi in 20 hrs.	56bls. S.W. from Oriskany in 48 hrs. Dry	Dry								

COUNTY	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Cameron	Centre	Clinton
MAP NUMBER	37	38	39	40	41	42	43	44	45		
NAME OF WELL	State of Penna Tract D, No. 1	State of Penna Tract D, No. 2	State of Penna Tract 19, No. 1	State of Penna Tract 19, No. 2	State of Penna Tract 20, No. 1	PH Johnson	State of Penna Tract D, No. 2	Michael O'Brien	State of Penna Tract 2, No. 2		
OPERATOR	Mfr Light & Heat Co. and Keta Gas & Oil Co.	Keta Gas & Oil Co.	Manufacturers Light & Heat Co.	Keta Gas & Oil Co.	Manufacturers Light & Heat Co.	Woodrock Oil & Gas Co.	Manufacturers Light & Heat Co.	Leta Oil & Gas Co.	New York State Nat. Gas Corp.		
TOWNSHIP	Gibson	Gibson	Gibson	Gibson	Gibson	Grove	Grove	Burnside	East Keating		
QUADRANGLE	Karthaus	Karthaus	Driftwood	Driftwood	Driftwood	First Fork	Sinnemahoning	Karthaus	Keating		
LATITUDE	0.45 mi. S. 41° 15'	1.15 mi. S. 41° 15'	0.60 mi. N. 41° 20'	0.65 mi. N. 41° 20'	0.93 mi. S. 41° 20'	1.25 mi. S. 41° 25'	2.04 mi. S. 41° 20'	0.25 mi. N. 41° 05'	2.82 mi. N. 41° 20'		
LONGITUDE	1.46 mi. W. 78° 10'	1.75 mi. E. 78° 10'	0.43 mi. E. 78° 10'	0.89 mi. W. 78° 10'	2.13 mi. E. 78° 15'	1.34 mi. W. 78° 00'	1.81 mi. E. 78° 05'	0.80 mi. W. 78° 00'	1.34 mi. E. 78° 00'		
DATE COMPLETED	11-20-52	12-26-52	10-6-52	10-20-52	12-1-52	1-25-52	12-31-52	9-28-52	5-22-52		
ELEVATION	2058	2110	1157	2005	933	980	1904	1669	1559		
BEREA - CORRY											
MURRYSVILLE											
TULLY	6530-6670	6612-	5414-5534	6247-	5180-	5402-5515	6591-6712	7135-	5492-5605		
ONONDAGA	7490-	7422-	6149-	6986-	5870-	6160-	7396-7412	8180-	6272-6296		
ORISKANY	7565-	7455-7475	6194-6222 Shot with 30 q's 6195-6201	7012-7034	5923- Gas	6185- Show of salt water at 6194	7412-7426	8209-	6296-6317 Gas		
SALINA											
LOCKPORT											
ALBION											
QUEENSTON											
TOTAL DEPTH	7593	7484	6242	7043	5937	6233	7442	8257	6317		
DEEPEST FORMATION TESTED	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany		
RESULT	Dry	Dry	10 Mcf gas from Oriskany after shot RP 120 psi in 14 hrs. Abandoned	1020 Mcf gas from Oriskany RP 3550 psi Shot twice No increase	4800 Mcf gas from Oriskany RP 3810 psi in 15 hrs	Abandoned	Dry	Dry	504 Mcf gas from Oriskany RP 440 psi in 14 hrs		

※ 15 minute quadrangle

TABLE 1, SHEET 6

COUNTY	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton
MAP NUMBER	46	47	48	49	50	51	52	53	54				
NAME OF WELL	Chatham Water Works, No. 1	Mohavik Road & Gun Club	State of Penna Tract 13, No. 1	John Springer	Birch Hunting Club, No. 1	Edwin Calhoun	Charlotte Clark	Geo. & Jos. Cross	D.A. Doebl				
OPERATOR	Manufacturers Light & Heat Co.	Murphy Oil & Gas Dev. Co.	New York State Nat Gas Corp.	Murphy Oil & Gas Dev. Co.	Godfrey L. Cabot, Inc.	John Fox et al.	Godfrey L. Cabot, Inc.	New York State Nat Gas Corp.	D.A. Doebl				
TOWNSHIP	Gallagher	Gallagher	Gallagher	Gallagher	Leidy	Leidy	Leidy	Leidy	Leidy				
QUADRANGLE	Waterville	Waterville	Glen Union	Waterville	Tamarack	Hammersley Fork	Tamarack	Tamarack	Hammersley Fork				
LATITUDE	0.60 mi. N. 41° 15'	0.02 mi. N. 41° 15'	0.45 mi. N. 41° 20'	1.36 mi. N. 41° 15'	1.82 mi. S. 41° 30'	0.30 mi. N. 41° 25'	1.97 mi. S. 41° 30'	0.29 mi. N. 41° 25'	0.91 mi. S. 41° 25'				
LONGITUDE	0.96 mi. W. 77° 25'	1.23 mi. E. 77° 30'	0.80 mi. E. 77° 35'	0.61 mi. W. 77° 25'	1.32 mi. W. 77° 45'	0.38 mi. E. 77° 35'	0.37 mi. W. 77° 50'	0.37 mi. E. 77° 50'	0.95 mi. W. 77° 55'				
DATE COMPLETED	6-30-52	7-11-52	3-13-52	5-7-52	4-7-52	1-12-52	7-11-52	10-6-52	3-31-52				
ELEVATION	1681	1791	2111	1749	1759	1005	1136	1954	1403				
BEREA - CORY													
MURRYSVILLE													
TULLY	7242-7403	7434-	7076-7180	7305-7395	5529-5641	5140-5244	5345-5430	6208-	5418-5536				
ONONDAGA	8378-8421	8496-	8094-8144	8428-	6375-6402	5930-	6119-	7028-	6117-				
ORISKANY	8421-8469	8536-8574	Ridgeley 8144-8173 Shriver 8173-8196	8471- poor sand	6402-6426 Show of gas Salt Water	5955- Gas	7043- Gas 7045-7048		6154-6162 Gas				
SALINA													
LOCKPORT													
ALBION	RED MEDINA (GRIMSBY)												
	WHITE MEDINA (WHIRLPOOL)												
QUEENSTON													
TOTAL DEPTH	8576	8576	8311	8530	6426	5974	6125	7059	6164				
DEEPEST FORMATION TESTED	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Onondaga	Oriskany	Oriskany				
RESULT	Gas pockets at 8240, 8357 and 8383 Dry in Oriskany	Abandoned	18 Mcf gas at 1749 Dry in Oriskany	1,000 Mcf gas at 7840 quickly exhausted Abandoned	Show of gas at 6412 in Oriskany 8 bbls S.W. Abandoned	684 Mcf gas from Oriskany after shot R.P. 810 psi.	Abandoned above Oriskany	928 Mcf gas from Oriskany after shot R.P. 1140 psi in 7 days	1,300 Mcf gas from Oriskany R.P. 240 psi in 2 hrs				

COUNTY	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton
MAP NUMBER	55	56	57	58	59	60	61	62	63				
NAME OF WELL	D A Doebler 2	A Downing 1	Duffek 1	Duffek 2	HE Finnefrack 2	Pat Foley Estate 1	Pat Foley Estate 2	Pat Foley Estate 3	S E Furick 1				
OPERATOR	New York State Nat Gas Corp.	New York State Nat Gas Corp.	D M Simon Oil & Gas Co.	D M Simon Oil & Gas Co.	New York State Nat Gas Corp.	Keta Gas & Oil Co.	Keta Gas & Oil Co.	Keta Gas & Oil Co.	Mid Atlantic Oil & Gas Co.				
TOWNSHIP	Leidy	Leidy	Leidy	Leidy	Leidy	Leidy	Leidy	Leidy	Leidy				
QUADRANGLE	Hammersley Fork	Tamarack	Tamarack	Tamarack	Tamarack	Tamarack	Tamarack	Tamarack	Hammersley Fork				
LATITUDE	1.20 mi. S. 41° 25'	0.25 mi. S. 41° 25'	0.16 mi. S. 41° 25'	0.11 mi. S. 41° 25'	0.91 mi. N. 41° 25'	0.13 mi. S. 41° 25'	0.13 mi. S. 41° 25'	0.14 mi. S. 41° 25'	2.05 mi. N. 41° 25'				
LONGITUDE	0.80 mi. W. 77° 55'	0.04 mi. W. 77° 50'	0.13 mi. W. 77° 50'	On meridian 77° 50'	1.44 mi. W. 77° 50'	0.29 mi. W. 77° 50'	0.44 mi. W. 77° 50'	0.23 mi. W. 77° 50'	1.66 mi. E. 77° 55'				
DATE COMPLETED	4-10-52	9-2-52	7-29-52	9-22-52	3-21-52	6-26-52	7-10-52	8-12-52	2-9-52				
ELEVATION	1475	1667	1680	1703	1670	1752	1907	1721	984				
BEREA - CORRY													
MURRYSVILLE													
TULLY	5337-5450	5983-	5947-	5971-	5461-	5970-	6156-	5957-	5157-5260				
ONONDAGA	6139 -	6797 -	6754 -	6770 -	6233 -	6780 -	6956 -	6768 -	5931 -				
ORISKANY	6146 - Gas at 6151	6817 - 191 Mcf gas at 6820	6777 - Shot with 20 qts	6805 - Show of gas at 6807 Salt Water	6253 - Gas at 6256	6813 - Gas	6988 - Salt Water	6791 - Gas	5949 - Gas				
SALINA													
LOCKPORT													
ALBION	RED MEDINA (GRIMSBY)												
	WHITE MEDINA (WHIRLPOOL)												
QUEENSTON													
TOTAL DEPTH	6161	6850	6823	6844	6261	6830	6995	6805	5952				
DEEPEST FORMATION TESTED	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany				
RESULT	213 Mcf gas from Oriskany	321 Mcf gas from Oriskany RP 1640 psi in 8 hrs	Dry	Show of gas in Oriskany Salt water rose 150 ft in hole Abandoned	5082 Mcf gas from Oriskany RP 330 psi in 16 hrs.	4900 Mcf gas from Oriskany after shot RP 1690 psi in 15 hrs	Salt water rose 3000 ft overnight Show of gas at 6993 Abandoned	800 Mcf gas from Oriskany Abandoned	5500 Mcf gas from Oriskany				

TABLE 1, SHEET 8

[illegible]

COUNTY	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton
MAP NUMBER	73	74	75	76	77	78	79	80	81	
NAME OF WELL	Thomas Jen's 1	Thomas Jen's 2	W.E. Joseph 1	W.E. Joseph 2	Kelly 1	John Kiser 1	Lewis Hun Kle 2	Herbert Martin 1	R.E. M ^c Closkey 1	
OPERATOR	John M ^c Guire et al	John M ^c Guire et al	New York State Nat. Gas Corp	New York State Nat. Gas Corp	Gabor et al	Godfrey L. Cabot, Inc.	New York State Nat. Gas Corp.	E.P. Sheridan	New York State Nat. Gas Corp	
TOWNSHIP	Leidy	Leidy	Leidy	Leidy	Leidy	Leidy	Leidy	Leidy	Leidy	
QUADRANGLE	Tamarack	Tamarack	Tamarack	Tamarack	Tamarack	Hammersley Fork	Tamarack	Tamarack	Tamarack	
LATITUDE	0.19 mi. S. 41° 25'	0.29 mi. S. 41° 25'	0.10 mi. N. 41° 25'	0.09 mi. S. 41° 25'	2.57 mi. N. 41° 25'	1.83 mi. S. 41° 25'	2.11 mi. N. 41° 25'	1.80 mi. S. 41° 25'	2.84 mi. N. 41° 25'	
LONGITUDE	0.29 mi. W. 77° 50'	0.21 mi. W. 77° 50'	0.34 mi. E. 77° 50'	0.16 mi. W. 77° 50'	2.17 mi. W. 77° 50'	1.19 mi. E. 77° 55'	0.35 mi. W. 77° 50'	1.68 mi. W. 77° 45'	0.78 mi. W. 77° 50'	
DATE COMPLETED	2-25-52	9-15-52	12-18-52	6-8-52	8-12-52	10-8-52	3-19-52	8-26-52	8-29-52	
ELEVATION	1849	1794	1949	1675	1001	1531	1487	1737	1319	
BEREA - CORRY										
MURRYSVILLE										
TULLY	6057-	5980-	6246-6362	5918-	5198-	6130-6260	5385-5487	6882-	5426-	
ONONDAGA	6853-	6791-	7094-7117	6710-	5980-		6167-	7760-	6190-	
ORISKANY	6870-	6827-	7117-	6730-	5999-	6186-	6186-	7787-7818	6215-6240	
	Gas at 6874	Gas at 6830	1/4 Mcf gas at 7126	Gas	Show of gas at 6016		Gas at 6187-6190	No gas or S.W.	Gas at 6219, 6221	
SALINA										
LOCKPORT										
ALBION										
	RED MEDINA (GRIMSBY)									
	WHITE MEDINA (WHIRLPOOL)									
QUEENSTON										
TOTAL DEPTH	6874	6900	7153	6757	6017	6449	6202	7830	6259	
DEEPEST FORMATION TESTED	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Tully	Oriskany	Oriskany	Oriskany	
RESULT	60,000 Mcf gas from Oriskany	150 Mcf gas from Oriskany	Show of gas in Oriskany Abandoned	3000 Mcf gas from Oriskany R.P. 1670 psi in 15 hrs.	Dry	Abandoned above Onondaga	1,100 Mcf gas from Oriskany R.P. 705 psi in 15 hrs	Dry	185 Mcf gas from Oriskany	

Summarised record of deep wells (continued).

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TABLE 1, SHEET 12

COUNTY	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton
MAP NUMBER	100	101	102	103	104	105	106	107	108			
NAME OF WELL	State of Penna Tract 23 No. 3	L. Pfautz and M. Fisher	Pharis 1	A R Pierson 1	Steele Estate 1	John W Talley 1	John W Talley 2	John W Talley 3	Tomko 1			
OPERATOR	Parson Brothers	John Fox et al	Fairman Oil & Gas Co.	New York State Nat. Gas Corp.	John McGuire et al	New York State Nat. Gas Corp.	New York State Nat. Gas Corp.	New York State Nat. Gas Corp.	Robert Moffatt et al			
TOWNSHIP	Leidy	Leidy	Leidy	Leidy	Leidy	Leidy	Leidy	Leidy	Leidy			
QUADRANGLE	Tamarack	Hammersley Fork	Hammersley Fork	Tamarack	Hammersley Fork	Tamarack	Tamarack	Tamarack	Tamarack			
LATITUDE	0.55 mi. N. 41°25'	1.41 mi. N. 41°25'	2.05 mi. N. 41°25'	2.27 mi. N. 41°25'	0.09 mi. N. 41°25'	2.61 mi. S 41°30'	2.58 mi. S. 41°30'	2.44 mi. S 41°30'	0.23 mi. S 41°25'			
LONGITUDE	1.29 mi. E. 77°50'	1.24 mi. E. 77°55'	1.67 mi. E. 77°55'	1.62 mi. W 77°50'	1.75 mi. E. 78°00'	0.42 mi. E. 77°50'	1.20 mi. E. 77°50'	1.81 mi. E. 77°50'	0.53 mi. W. 77°50'			
DATE COMPLETED	12-27-52	7-25-52	2-2-52	7-21-52	7-29-52	2-29-52	6-5-52	8-1-52	10-13-52			
ELEVATION	1849	945	1021	979	1198	1688	1606	1861	1886			
BEREA - CORRY												
MURRYSVILLE												
TULLY	6160 -	5140 -	5208 -	5128 -	5680 -	5615 - 5735	5390 - 5480	5585 - 5708	6102 -			
ONONDAGA	6985 -	5963 -	5987 -	5913 -	6433 -	6414 -	6190 - 6205	6409 - 6426	6930 -			
ORISKANY	7000 - Gas, some SW	6003 Salt Water at 6007	6015 - Gas at 6017-6023	5924 - Gas at 5927	6450 - S.W. at 6466	6433 - Gas at 6437	6205 - 6228 Gas	6426 - Gas at 6427	6956 - 310 Mcf gas at 6959 Salt water at 6960			
SALINA												
LOCKPORT												
ALBION												
QUEENSTON												
TOTAL DEPTH	7002	6008	6031	5974	6466	6457	6230	6440	6974			
DEEPEST FORMATION TESTED	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany			
RESULT	32,000 Mcf gas from Oriskany R.P. 3600 psi in 48 hrs Some salt water	Salt Water in Oriskany Abandoned	500 Mcf gas from Oriskany after shot	115 Mcf gas from Oriskany R.P. 405 psi in 7 days	Salt Water in Oriskany	876 Mcf gas from Oriskany after shot R.P. 1140 psi in 2 1/2 hrs	1174 Mcf gas from Oriskany R.P. 590 psi in 16 hrs.	8,800 Mcf gas from Oriskany R.P. 397 psi in 60 hrs	Salt water rose 2200 ft in hole Abandoned			

TABLE 1, SHEET 14

COUNTY	Clinton	Clinton	Clinton	Clinton	Crawford	Crawford	Erie	Erie	Erie
MAP NUMBER	118	119	120	121	122	123	124	125	126
NAME OF WELL	Clyde Wertz 1	Wright 1	State of Penna Tract A, No 2	State of Penna Tract 12, No 1	Good, Walsh & Russell, et al	Zickefoose 1	C. J. Follette 4	H.C. Follette 2	H.C. Follette 3
OPERATOR	New York State Nat. Gas Corp.	E. P. Sheridan et al	New York State Nat. Gas Corp.	New York State Nat. Gas Corp.	Russell McConnell et al	Russell McConnell et al	Pennsylvania Gas Co. (1415)	Pennsylvania Gas Co. (1410)	Pennsylvania Gas Co. (1422)
TOWNSHIP	Leidy	Leidy	Noyes	Noyes	Conneaut	Sadsbury	Wayne	Wayne	Wayne
QUADRANGLE	Tamarack	Hammersley Fork	Snow Shoe	Renovo East	Linesville	Linesville	Corry	Corry	Corry
LATITUDE	1.68 mi. N. 41° 25'	0.43 mi. S. 41° 25'	0.61 mi. S. 41° 15'	2.32 mi. N. 41° 15'	0.20 mi. N. 41° 40'	1.41 mi. N. 41° 35'	2.25 mi. S. 42° 00'	2.27 mi. S. 42° 00'	2.30 mi. S. 42° 00'
LONGITUDE	0.20 mi. W. 77° 50'	0.44 mi. W. 77° 55'	1.14 mi. W. 77° 45'	1.70 mi. W. 77° 40'	1.61 mi. W. 80° 25'	2.15 mi. W. 80° 15'	1.46 mi. E. 79° 45'	1.26 mi. E. 79° 45'	1.36 mi. E. 79° 45'
DATE COMPLETED	1-30-52	7-7-52	11-21-52	4-25-52	8-8-52	11-14-52	9-11-52	5-19-52	11-26-52
ELEVATION	1779	924	2056	1713	1135	1070	1780	1797	1785
BEREA -CORRY									
MURRYSVILLE									
TULLY	5600-5708	4920-	6585-	6413-6525			2886-	2910-	2895-
ONONDAGA	6380-	5727-	7550-	7384-7410	2540-2743	2808-3001	3142-	3159-	3144-
ORISKANY	6396- Gas at 6399	5742- 80 Mcf gas	7592-7619	Ridgeley ss. 7412-7450	2743-2755 Salt water at 2747	3001-3015 Salt water rose 300 ft. at 3005	No sandstone	No sandstone	No sandstone
SALINA					Salt & shale 3014-3132 Salt 3190-3240 Salt 3441-3468	Salt 3305-3505	Salt 3665-3712 Shale & salt 3712-3820	Shale, dolomitic limestone, & salt 3695-3884	Shale, dolomitic limestone, & salt 3689-3908
LOCKPORT					Salt water at 3690	Show gas at 3933 S W 3945-3948	Newburg 4181-4112 Show oil and gas 30 gals in 3 hrs	Salt water at 4150 Salt water at 4143	Show gas at 4147 Salt water at 4143
ALBION	RED MEDINA (GRIMSBY)				3908-3926	4186-4228	4316-4402 Show of gas	4346-4413	4339-4425 Show of gas
	WHITE MEDINA (WHIRLPOOL)				3928-4080 Show gas 3945-3950	4235-4305 Light show gas 4360-4372	4493-4504 Gas	4506-4515 Gas 4510-4513	4498-4510 Gas
QUEENSTON					4080-	4372-	4506-	4520	4515-
TOTAL DEPTH	6408	5757	7734	7630	4109	4378	4538	4531	4517
DEEPEST FORMATION TESTED	Oriskany	Oriskany	Oriskany	Oriskany	Albion	Albion	Albion	Albion	Albion
RESULT	21,500 Mcf gas from Oriskany R.P. 690 psi in 4 hrs	Show of gas from Oriskany	Dry	Dry	40 Mcf gas from White Medina after shot Abandoned	3 Mcf gas from White Medina 4256-4258 4267-4269	304 Mcf gas from White Medina R.P. 881 psi in 41 hrs	732 Mcf gas from White Medina after shot R.P. 886 psi in 89 hrs	1,157 Mcf gas from White Medina after shot R.P. 735 psi in 72 hrs

COUNTY	Lycoming	McKean	Mercer	Mercer	Mercer	Potter	Potter	Potter	Potter
MAP NUMBER	127	128	129	130	131	132	133	134	135
NAME OF WELL	E E Hughes	West Branch AW-4	Chas Cromart	Dale Kyser	Maffie	Zopher Benson	Zopher Benson	Otto Braun	Bert Sackell
OPERATOR	Godfrey L Cabot Inc.	Healy Petroleum Corp	Sharon Steel Corp	Glenn Smith et al	L. Blood	EP Sheridan et al	Carter Camp Dev. Co.	Dorcie Calhoun Oil & Gas Co.	Abbott and Chapman
TOWNSHIP	Cogan House	Bradford	Hickory	West Salem	West Salem	Abbott	Abbott	Abbott	Abbott
QUADRANGLE	Trout Run	Kinzua	Youngstown	Kinsman	Shenango	Galeton	Galeton	Galeton	Cherry Springs
LATITUDE	1.21 mi N 41° 25'	1.19 mi S 41° 55'	2.56 mi N 41° 10'	1.42 mi S 41° 25'	0.64 mi S 41° 25'	1.90 mi S 41° 40'	2.29 mi S 41° 40'	1.56 mi S 41° 40'	2.60 mi S 41° 40'
LONGITUDE	1.94 mi W 77° 10'	0.19 mi W 78° 45'	0.79 mi W 80° 30'	0.66 mi W 80° 30'	0.32 mi E 80° 30'	1.75 mi E 77° 45'	2.09 mi W 77° 40'	0.24 mi E 77° 40'	0.10 mi W 77° 45'
DATE COMPLETED	9 - 3 - 52	12 - 12 - 52	3 - 4 - 52	10 - 10 - 52	6 - 4 - 52	6 - 15 - 52	8 - 8 - 52	Shut down 1952	1 - 24 - 52
ELEVATION	1547	2086	905	1204	1238	1817	1630	2175	1878
BEREA - CORRY				305 - 373					
MURRYSVILLE									
TULLY	6208 - 6332	4234 - 4294				5272 -	4730 - 4800	5275 -	
ONONDAGA	7408 - 7465	4618 - 4688 gas pocket at 4632	3247 - 3434	3096 - Show gas at 3259	3117 -	6150 - 6182	5550 - 5573	6084 -	
ORISKANY	Ridgeley 7453-7533 Shiner, 7553-7571	4688 - 4715 Salt water Show gas	3434 - 3455 Hole full of water at 3437	3318 - 3324	3340 - 3348	Ridgeley ss absent Shiner chert 6182 -	Ridgeley ss absent Shiner chert 5573 -	Horizon 6114 - 6118	
SALINA			Salt, 3816 - 3821 Salt, 3928 - 4020		Salt, 3640 - 3800 Salt, 3915 - 3960				
LOCKPORT			Newburg 4635-4638 2 Mi gas at 4635 Hole full water at 4680		Salt water at 4438				
ALBION			4920 - 4976 4984 - 4995		4678 -				
			4995 - 5037 5043 - 5072		4707 -				
QUEENSTON			5120 -		4878 -				
TOTAL DEPTH.	7579	4719	5127	3374	4889	6201	5655	6383	6050
DEEPEST FORMATION TESTED	Oriskany	Oriskany	Albion	Oriskany	Albion	Oriskany	Oriskany	Oriskany	Tully
RESULT	Show of gas in Oriskany at 7498 Shot 7468 - 7500 No increase Abandoned	Salt water at 4692 8 Mi gas at 4699 in Oriskany Abandoned	Shows of gas of 4827 - 4930 4991 - 4994 5001 - 5004 5020 - 5024 Abandoned	Abandoned	Dry	Dry	Dry	Dry	Did not reach Onondaga Abandoned

* 15 minute quadrangle

TABLE 1, SHEET 16

COUNTY	Potter	Potter	Potter	Potter	Potter	Potter	Potter	Potter	Potter	Potter	Potter	Potter
MAP NUMBER	136	137	138	139	140	141	142	143	144			
NAME OF WELL	Frank Sykora	Morris Vincent	Heymann	Milton Caldwell	Earl Ely	HA Heinrich	Fred Kerlin	Geo McGuire	Hurley Morgan			
OPERATOR	Darcie Calhoun et al	Carter Comp. Dev. Co.	Bug Drilling Co.	Godfrey L. Cabot Inc	Lilly and Kahle	S and M Oil & Gas Co.	Leidy Prospecting Co.	Hanover Gas & Oil Co.	Godfrey L. Cabot Inc			
TOWNSHIP	Abbott	Abbott	Pike	Stewardson	Stewardson	Stewardson	Stewardson	Stewardson	Stewardson			
QUADRANGLE	Galeton	Galeton	Galeton	Short Run	Tamarack	Oleona	Tamarack	Tamarack	Oleona			
LATITUDE	2.44 mi. S 41° 40'	1.41 mi. S. 41° 40'	0.76 mi. S. 41° 45'	0.04 mi. N. 41° 30'	1.26 mi. S. 41° 30'	0.61 mi. N. 41° 30'	0.97 mi. S. 41° 30'	1.31 mi. S. 41° 30'	0.34 mi. N. 41° 30'			
LONGITUDE	1.78 mi. W 77° 40'	1.54 mi. E. 77° 45'	1.52 mi. E. 77° 40'	0.92 mi. W. 77° 45'	1.10 mi. E. 77° 50'	1.50 mi. E. 77° 45'	1.62 mi. E. 77° 50'	0.75 mi. E. 77° 50'	1.48 mi. E. 77° 45'			
DATE COMPLETED	Shut down 1952	3 - 15-52	1 - 19-52	5 - 28-52	1 - 11-52	1 - 25-52	3 - 31-52	3 - 13-52	4 - 24-52			
ELEVATION	2036	1960	1458	1183	1058	1755	1266	1056	1714			
BEREA - CORY												
MURRYSVILLE												
TULLY	5214 -	5365 -	5277 - 5340	5061 - 5145	5163 -	6465	5364 - 5470	5195 -	6072 - 6170			
ONONDAGA		6223 - 6244	6055 - 6078	5869 - 5881	6014 -		6184 -	6060 -	6880 - 6896			
ORISKANY		Ridgeley ss absent Shiner chert 6244 - 6322	6078 - 6093	5881 - Gas at 5883	6030 - Gas and SW.		6199 - 6233	6080 - Show of gas at 6082	6896 - Soft water at 6900 Rose 3000 ft in 3 days			
SALINA			6145 -									
LOCKPORT												
ALBION	RED MEDINA (GRIMSBY)											
	WHITE MEDINA (WHIRLPOOL)											
QUEENSTON												
TOTAL DEPTH	6000	6355	6505	5898	6063	6500	6238	6100	6900			
DEEPEST FORMATION TESTED	Tully	Oriskany	Oriskany	Oriskany	Oriskany	Tully	Oriskany	Oriskany	Oriskany			
RESULT	Did not reach Onondaga	Dry	Dry	518 Mcf gas from Oriskany RP 1100 psi in 48 hrs.	28 Mcf gas from Oriskany after shot 1/2 bailer SW overnight Abandoned	Abandoned above Onondaga	Dry	Abandoned	Gas pocket at 4777 Soft water in Oriskany Abandoned			

TABLE 1, SHEET 18

COUNTY	Potter	Potter	Potter	Potter	Potter	Tioga	Tioga	Tioga	Tioga		
MAP NUMBER	154	155	156	157	158	159	160				
NAME OF WELL	State of Penna Tract II, No. 1 Warrant 4925	State of Penna Tract II, No. 3	State of Penna Tract II, No. 5	Mark L. Roberts	Jos B Stebbins	Noel Ke	Walter W. Senzel				
OPERATOR	Keto Oil & Gas Co	Keto Oil & Gas Co	Keto Oil & Gas Co.	New York State Nat. Gas Corp	New York State Nat. Gas Corp	Bug Drilling Co	New York State Nat. Gas Corp				
TOWNSHIP	Wharton	Wharton	Wharton	Clymer	Clymer	Delmar	Westfield				
QUADRANGLE	First Fork	First Fork	First Fork	Gaines*	Gaines	Antrim	Elkland				
LATITUDE	0 08 mi S. 41° 30'	0.60 mi S. 41° 30'	0.42 mi S 41° 30'	1.62 mi N. 41° 50'	1.98 mi N. 41° 50'	0.03 mi S. 41° 45'	1.94 mi S 41° 55'				
LONGITUDE	1 12 mi W 78° 00'	1 98 mi W 78° 00'	1.50 mi W. 78° 00'	1.40 mi E. 77° 35'	1.86 mi E. 77° 35'	0.78 mi W. 77° 20'	0.50 mi E. 77° 30'				
DATE COMPLETED	4-10-52	10-17-52	11-13-52	10-31-52	12-12-52	7-11-52	8-29-52				
ELEVATION	1266	1164	1789	2030	1871	1415	1497				
BEREA-CORRY											
MURRYSVILLE											
TULLY	4825-	4157-	5334-	3856-	3720-	4544-4634	3567-3649				
OHONDAGA	5496-	5475-	6033-	4604-	4464-	5495-5522	4344-4562				
ORISKANY	5529- Gas at 5545	5485- Show of gas Shot 5490-5505	6057- Gas	4623- 3425 Mcf gas	4480- 4597 Mcf gas	5522-5560 Self sand 5522-5526 Hard sand 5526-5560	4362- First gas at 4164 Lost gas at 4176				
SALINA											
LOCKPORT											
ALBION											
QUEENSTON											
TOTAL DEPTH	5552	5558	6091	4657	4512	5639	4400				
DEEPEST FORMATION TESTED	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany				
RESULT	690 Mcf gas from Oriskany RP 2700 psi	18 Mcf gas from Oriskany after shot	300 Mcf gas from Oriskany after shot RP 1000 psi	Drilled for gas storage	Drilled for gas storage	Dry	Drilled for gas storage				

TABLE 2. Shallow-sand well completions in Pennsylvania in 1952.*

COUNTY	COMPLETIONS		GAS			OIL			DRY	
	NUMBER OF WELLS	AVERAGE TOTAL DEPTH (feet)	NUMBER OF WELLS	AVERAGE INITIAL OPEN-FLOW (M. cu. ft. per day)	AVERAGE TOTAL DEPTH (feet)	NUMBER OF WELLS	AVERAGE INITIAL PRODUCTION (barrels per day)	AVERAGE TOTAL DEPTH (feet)	NUMBER OF WELLS	AVERAGE TOTAL DEPTH (feet)
Allegheny	22	2,756	14	253	2,883	1	30	2,253	7	2,572
Armstrong	65	2,634	56	172	2,587	0	—	—	9	2,931
Butler	46	1,632	18	44	2,036	19	2.8	1,328	9	1,466
Cameron	8	3,131	0	—	—	0	—	—	8	3,131
Centre	1	4,005	0	—	—	0	—	—	1	4,005
Clarion	39	1,724	29	97	1,771	1	1.5	986	9	1,653
Clinton	2	1,483	1	500	1,427	0	—	—	1	1,540
Elk	6	2,263	6	84	2,263	0	—	—	0	—
Fayette	11	2,823	5	169	3,400	1	5	2,055	5	2,399
Forest	3	1,880	2	103	1,669	0	—	—	1	2,302
Greene	10	1,728	3	409	2,829	2	9	1,286	5	1,244
Indiana	19	3,135	15	109	3,052	0	—	—	4	3,445
Jefferson	58	2,983	40	56	2,991	0	—	—	18	2,966
McKean	12	1,982	10	79	1,802	0	—	—	2	2,882
Potter	1	1,521	0	—	—	0	—	—	1	1,521
Sullivan	1	2,772	0	—	—	0	—	—	1	2,772
Venango	2	2,015	0	—	—	0	—	—	2	2,015
Warren	1	2,070	1	12	2,070	0	—	—	0	—
Washington	28	2,615	23	306	2,518	0	—	—	5	3,065
Westmoreland	22	2,914	17	174	2,807	0	—	—	5	3,269
Total	357	2,459	240	145	2,534	24	4	1,380	93	2,543

* Does not include wells drilled in connection with underground gas storage or secondary-recovery oil operations.

TABLE 3. *Shallow-sand wells deepened in 1952.*

COUNTY	TOTAL		GAS			DRY	
	NUMBER OF WELLS	AVERAGE AMOUNT DEEPEMED (feet)	NUMBER OF WELLS	AVERAGE INITIAL OPEN-FLOW (M. cu. ft. per day)	AVERAGE AMOUNT DEEPEMED (feet)	NUMBER OF WELLS	AVERAGE AMOUNT DEEPEMED (feet)
Armstrong	13	940	9	129	1,023	4	754
Butler	2	672	1	37	850	1	495
Clarion	3	1,156	2	25	1,557	1	355
Greene	2	1,087	0	—	—	2	1,087
Indiana	1	1,850	1	66	1,850	0	—
Washington	4	1,092	0	—	—	4	1,092
Westmoreland	2	1,195	1	40	1,880	1	509
Total	27	1,032	14	100	1,207	13	840

